Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of Application by BellSouth Corporation For Authorization Under Section 271 Of The Communications Act To Provide In-Region, InterLATA Services In The States Of Georgia And Louisiana	)	CC Docket No. 01-277

DECLARATION OF RICHARD N. CLARKE
ON BEHALF OF AT&T CORP.

Based on my personal knowledge and on information learned in the course of my duties, I, Richard N. Clarke, declare as follows:

1. My name is Richard N. Clarke. My business address is 295 North Maple Avenue, Basking Ridge, NJ 07920.

2. I am employed by AT&T Corp. ("AT&T") as a Division manager in AT&T's Law and Government Affairs organization. In this position I am responsible for AT&T's economic policies related to the costing and pricing of local telecommunications services. I have directed AT&T's investigations into the structure of efficient pricing methods for telecommunications elements and services and AT&T's participation in the development of the HAI/Hatfield Model of forward-looking economic costs of local exchange networks and services. I also have experience in evaluating other local exchange costing models and methodologies such as the BCPM and the Federal Communications Commission's ("Commission's") Synthesis Model.

3. I have a Bachelor's degree in mathematics and economics from the University of Michigan and a Master's degree and a Ph.D. in economics from Harvard. Prior to joining AT&T with Bell Laboratories in 1986, I was an Assistant Professor of Economics at the University of Wisconsin-Madison, and worked as an Economist in the Antitrust Division of the U.S. Department of Justice.

4. Over the past dozen years, I have provided testimony before numerous regulatory commissions, including those of Texas, Wisconsin, Michigan and this Commission, among others. Much of this testimony has dealt with economic, costing and pricing issues related to local exchange competition.

I. INTRODUCTION AND SUMMARY

5. The purpose of my declaration is to demonstrate that even modest inflation of the costs that incumbent local exchange carriers ("ILECs") impose upon competitive local exchange carriers ("CLECs") is likely to have profound import for whether competitive entry will occur at all – or whether even existing competitive entries by CLECs will be sustained. For that reason, strict enforcement of requirements that ILECs provide interconnection and unbundled network elements ("UNEs") to their potential competitors at forward-looking cost-based rates, and that ILECs provision interconnection and unbundled network elements in a truly efficient and nondiscriminatory manner, is of critical importance in making possible widespread competitive entry into local exchange markets.

6. Although the critical importance of a firm's input costs is well understood by economists and businesspeople, this declaration demonstrates empirically the financial significance that even modest overstatements of a firm's input costs would have for typical firms

in the U.S. economy.[1] Even a 10% reduction in a firm's net revenues (as would occur if the input costs that comprise two-thirds of a firm's revenues were inflated by 15%) would virtually *eliminate* the profits (returns on equity or returns on debt plus equity) earned by the average firm in the Standard & Poor's 500 Index. Indeed, the average firm in the S&P 500 would also see its EBIT or EBITDA margins cut roughly in half by such an occurrence.[2]

7. Thus, it is essential that ILECs are not permitted to inflate CLECs' costs through inefficient provisioning of UNE-based services, or by charging interconnection and UNE rates that exceed their Total Element Long-Run Incremental Costs ("TELRIC"). Any assumption that full and accurate compliance with the Commission's rules – including efficient provisioning of UNE elements and strict adherence to the TELRIC standard – is of secondary importance, and that wide competitive entry can be expected to occur so long as such costs are within a "range" of compliance with the Commission's rules, is completely unfounded. Even small factors that inflate CLECs' costs severely impede competition across local exchange markets.

8. Because the costs associated with purchased UNEs – which include both the price of the UNEs and the costs associated with obtaining accurate and timely provisioning of those UNEs – typically represent at least 70 percent of the total revenues (including access, vertical features and other incidental revenues) that a CLEC can expect to receive as a UNE-

[1] I use the terms "costs" and "input costs" inclusively. Thus, a firm's costs or input costs are assumed to consist of both the dollars paid to its input suppliers, but also the internal costs that the firm incurs to use these inputs (*e.g.*, costs of operating its ordering and inspection systems, *etc.*).

[2] EBIT measures Earnings Before Interest and Taxes; EBITDA measures Earnings Before Interest, Taxes, Depreciation and Amortization.

based provider of local exchange and exchange access services,[3] each one percent overstatement of those costs reduces a CLEC's "top-line" net revenues by more than 0.7 percent. Thus, a 15 percent overstatement in UNE costs reduces the net revenues available to CLECs by at least 10 percent. Moreover, because the potential margins from UNE-based competitive entry are narrow, a 15 percent overstatement in a CLEC's UNE costs (*i.e.*, at least a 10 percent increase in CLEC costs) is likely to eliminate the potential for any profit from competitive entry by most CLECs in most markets.

9. Input cost overstatements of this magnitude necessarily trigger significant reactions by CLECs. Because a BOC's prices for its retail services effectively impose a cap on the price that any CLEC can charge for providing competitive local telephone service, CLECs cannot engage in the typical response of firms faced with an increase in input costs: charging higher retail prices. In consequence, the effect of even relatively modest increases in CLECs' UNE costs will be effectively to bar CLECs from entering local markets or to cause them to provide service only to the highest margin segments of those markets. This competitive reality is illustrated by recent developments in local exchange markets where potential CLECs are declining entry altogether or restricting their offerings only to certain classes of customers such as business customers or only extremely high volume or low-cost residence customers,[4] and are even cutting back on their marketing of existing local exchange offerings.[5] Although all local

[3] *See* WorldCom *Ex Parte* letter to Magalie Roman Salas in CC Docket No. 01-9, dated February 14, 2001, at 13. Indeed, 70 percent is a very conservative figure. Unfortunately, it is more typical to find UNEs priced at levels that amount to 90 percent (and sometimes more) of a CLEC's potential revenues.

[4] A recent report by the Texas Public Utilities Commission reveals that most of the CLECs in Texas are ceasing or significantly cutting back their residential local market offerings. *See Report to the 77th Texas Legislature, Scope of Competition in Telecommunications Markets of Texas,* Public Utilities Commission of Texas, at 54-61 (Sprint, WorldCom and Verizon and Excel Communications are all either significantly reducing their presence in residential voice market or ceasing those services altogether).

[5] *See id.* (noting that Sprint, MCI WorldCom and Verizon/VSSI are all focusing on the provision of data services rather than residential or long distance services which are now far less profitable).

markets in the nation will be affected by overstated UNE costs, the most severe competitive impact is likely to occur in residential and rural local exchange markets, where profit margins are lower than for business and urban residential customers.

II. AN OVERSTATEMENT OF UNE COSTS SERIOUSLY IMPEDES COMPETITIVE ENTRY.

10. Inflated UNE costs reduce the net revenues (*i.e.*, gross revenues minus purchased input costs) received by CLECs. The question is whether the reduction in net revenues occasioned by even a modest overstatement of UNE costs is likely to damage CLECs' profitability to the point that CLEC entry into local exchange markets is effectively precluded. It is a truism that in a perfectly competitive market, even a dollar's increase in the cost of inputs above efficient levels that is specific to a certain class of firms (*i.e.*, unintegrated CLECs), and that is not also experienced by a different class of firms (*i.e.*, integrated ILECs), would cause unintegrated CLECs not to enter a market, or if already present, eventually to exit. Nonetheless, it is useful to illustrate the impact of varying levels of input cost increases on the financial condition of CLECs and for large firms more generally.

11. Even though the financial condition of particular CLECs may not be sufficiently ascertainable so that the effect of imposing an unwarranted increase in their input costs can be directly calculated until after they cease operations, such a calculation can be performed for the typical large firm in U.S. industry whose financial data are readily available.[6] I do this by examining the financial data reported by the firms comprising the S&P 500 (as reported by Compustat), to evaluate how a decrease in the net revenues of these companies by

[6] The financial condition of a particular CLEC is often difficult for an "outsider" to determine, for a variety of reasons. For example, the CLEC may be privately owned, or may have obtained its financing through private sources. Information on other factors that affect a CLEC's financial condition, such as the amount of goodwill and the CLEC's contractual obligations, may not be publicly available.

specified percentages would affect their financial positions.[7] Note that because the firms selected to be included in the S&P 500 list are among the most stable and financially strong in the U.S. economy, the financial consequences to the CLECs from an equivalent increase in their input costs are likely to be far more dire.

12. Table 1 demonstrates the financial effects of declines of 0%, 5%, 10%, 15% and 20% in the net revenues of the S&P 500 firms – which would result if, assuming that input costs amount to two-thirds of these firms' gross revenues, input costs were elevated by 0%, 7.5%, 15%, 22.5% and 30%, respectively, and these firms had no flexibility to raise their retail prices in response.[8]

[7] Compustat, a division of Standard & Poor's, collects annually a wide selection of data on the major firms in the United States economy.

[8] Microsoft Excel software collecting the Compustat data and performing these financial calculations was developed for AT&T by The Brattle Group of Cambridge, Massachusetts.

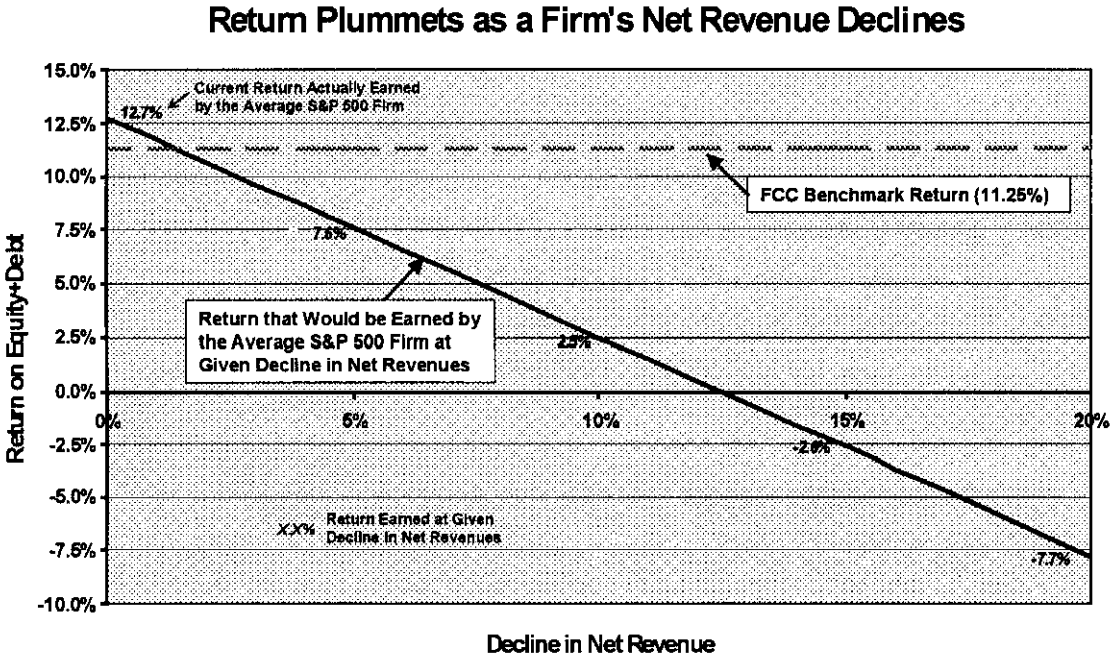
***Table 1:* Returns to the Total S&P 500**

	Decline in Net Revenue of:				
Average Return Measure	***0%***	***5%***	***10%***	***15%***	***20%***
EBT Margin	13.1%	8.5%	3.4%	-2.3%	-8.7%
Return on Equity+Debt	12.7%	7.6%	2.5%	-2.6%	-7.7%
Return on Equity	17.4%	9.0%	0.5%	-7.9%	-16.3%
EBITDA Margin	22.7%	18.6%	14.1%	9.1%	3.4%
EBIT Margin	16.7%	12.3%	7.5%	2.0%	-4.1%

Source: Compustat Database, Year-end 1999

13. Table 1 shows that if an S&P 500 firm's net revenues are reduced by 5% (as would occur if input costs amounting to two-thirds of its gross revenues were elevated by 7.5%), its initial return on Equity+Debt of 12.7% would be reduced by 40% (or over 500 basis points) to a new return level of 7.6%.[9] An overstatement of input costs of just 10% (corresponding to a 6.7% reduction in net revenues if purchased inputs amount to two-thirds of the firm's gross revenues) results in a reduction in the Return on Equity+Debt by more than in half from its base value. If the input cost increase is sufficient to reduce net revenues by 10%, Return on Equity+Debt is cut by 80% (or over 1000 basis points) to a new return level of only 2.5%.

[9] The return measure most comparable to that popularly examined by regulators is Return on Equity+Debt. While not exactly equaling the Return on Ratebase ("ROR") measure that is the focus of most regulatory proceedings, this measure tends to be similar in magnitude to regulatory ROR and, most importantly, is likely to vary similarly with ROR as net revenues are reduced.



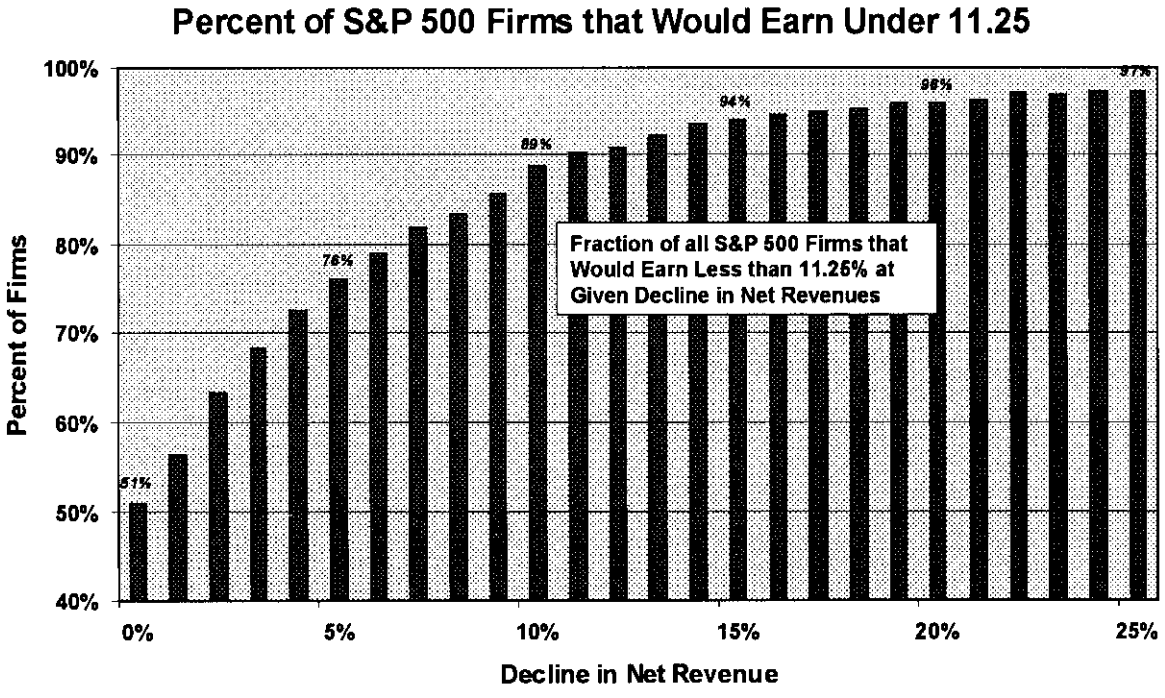
14. Furthermore, as shown in Table 2 below, a net revenue reduction of 10% (as would occur if input prices amounting to two-thirds of the firm's gross revenues were elevated by 15%) is sufficient to ensure that almost 9 out of every 10 firms in the S&P 500 would have a Return on Equity+Debt that is less than 11.25%.[10]

[10] In its Universal Service, Price Cap and ROR Prescription proceedings, the Commission found 11.25% to be the target ROR for ROR-regulated ILECs and for Universal Service provision, and a return of 10.25% to be the minimum ROR that a price cap-regulated ILEC must be earning before being awarded a rate increase. Thus, even an input cost overstatement that reduces a CLEC's net revenues by only 5% would be sufficient to cause the Commission's rules to offer an upwards rate adjustment or support increase – if the affected party was a monopoly ILEC.

Table 2: **Return on Equity+Debt in the Total S&P 500**

		Decline in Net Revenue of:				
Return on Equity+Debt		***0%***	***5%***	***10%***	***15%***	***20%***
No. of Firms with Returns:	< 11.25%	227	338	395	418	427
No. of Firms with Returns:	> 11.25%	218	107	50	27	18
Total No. of Firms		445	445	445	445	445

Note: Required data are missing for 55 firms. Total sample size = 445 firms.
Source: Compustat Database, Year-end 1999



15. Given the magnitude of the deterioration in financial position that results from these moderate declines in net revenues, it is clear that a permanent overstatement of input

costs of as little as 5% or 10% would cause either the immediate bankruptcy or imminent restructuring of most firms in the S&P 500. Because most CLECs are less well capitalized than the firms that comprise the S&P 500, the financial deterioration that they would suffer from comparably elevated input costs would be even more severe – and their market exit would be even more speedy and complete.

16. As detailed in Table 1, an examination of other measures of financial status suggest the same result. One such measure is Earnings Before Interest, Taxes divided by Net Sales (EBIT margin). EBIT margin indicates the cash flow that is generated before interest and taxes are paid. Because interest and tax payments are mandatory for a going firm, EBIT margins must be sufficient to cover these expenses. When net revenues are reduced by 10%, EBIT margins decline by 920 basis points for the entire S&P 500 and by 820 basis points for the ILEC members of the S&P 500.[11] Even under the "rosiest" measure of financial performance – Earnings Before Interest, Taxes, Depreciation and Amortization divided by Net Sales (EBITDA margin) – a modest decline in net revenues spells significant financial damage.[12] For CLECs and other nascent firms that rely heavily on debt financing, declines of either magnitude would severely injure their ability to secure any debt financing, or to service existing debt.

[11] Table 1 shows that the average firm in the S&P 500 has an EBIT margin of 16.7%. However, as shown in Table 3 below, the firms in the S&P 500 that are predominantly incumbent local exchange carriers (Alltel, BellSouth, CenturyTel, Qwest, SBC and Verizon) have average EBIT margins of 26.3%, because the local exchange industry is both profitable and capital-intensive.

[12] EBITDA margin indicates the maximum cash flow that is generated before non-operating expenses are considered.

Table 3: **Returns to the ILECs in the S&P 500**

	Decline in Net Revenue of:				
Average Returns Measure	***0%***	***5%***	***10%***	***15%***	***20%***
EBT Margin	21.2%	17.1%	12.5%	7.3%	1.5%
Return on Equity+Debt	13.5%	11.1%	8.6%	6.2%	3.8%
Return on Equity	32.3%	23.1%	13.9%	4.7%	-4.5%
EBITDA Margin	44.0%	41.1%	37.8%	34.1%	30.0%
EBIT Margin	26.3%	22.4%	18.1%	13.3%	7.9%

Source: Compustat Database, Year-end 1999

17. Moreover, analyses of the effects of such declines in net revenues on the S&P 500 firms greatly understate the likely financial impact on the CLECs. The firms in the S&P 500 are among the strongest financially in the entire U.S. economy and, as indicated by Table 3, the ILECs in the S&P 500 are even more heavily and conservatively capitalized than the average S&P 500 firm. By contrast, due to their market position as insurgents, CLECs are typically far less well capitalized, more reliant on aggressive debt financing, and less financially strong than either the ILECs or the average S&P 500 firm. Indeed, there are no "pure" CLECs that have the financial status to yet qualify to be members of the S&P 500.

18. Perhaps the best set of CLEC-surrogate firms that are members of the S&P 500 are non-ILEC telecommunications carriers. These companies include cellular carriers, cable television carriers and interexchange carriers (AT&T, Comcast, Global Crossing, Nextel, Sprint FON, Sprint PCS, and WorldCom). Because of these firms' incumbent positions in their non-CLEC cellular, cable or interexchange markets, they also are likely to be much more financially

secure than pure CLECs. Yet, as Table 4 demonstrates, a given reduction in net revenues would have a far more dire effect on this class of firms than on the S&P 500 or the ILECs generally.

***Table 4:* Returns to Cable, Cellular and Interexchange Carriers in the S&P 500**

	Decline in Net Revenue of:				
Average Return Measure	***0%***	***5%***	***10%***	***15%***	***20%***
EBT Margin	-18.5%	-24.7%	-31.6%	-39.4%	-48.1%
Return of Equity+Debt	2.7%	1.5%	0.2%	-1.0%	-2.2%
Return on Equity	-9.7%	-12.2%	-14.7%	-17.2%	-19.7%
EBITDA Margin	13.0%	8.5%	3.4%	-2.3%	-8.7%
EBIT Margin	-6.8%	-12.4%	-18.6%	-25.6%	-33.5%

Source: Compustat Database, Year-end 1999

19. Note the far greater leverage of this group vis à vis the more conservative financing of the S&P 500 as a whole, and the ILECs in particular. The difference between Earnings Before Taxes divided by Net Sales (EBT margin) and EBIT margin is Interest divided by Net Sales. Comparing Table 4 with Tables 2 and 3 shows that for the non-ILEC telecommunications carriers as a group, interest expense is, roughly, 12% of Net Sales. But when this same difference is calculated for the S&P 500 as a whole, interest expense is shown to be only about 4% of net sales; or when calculated for the ILECs only, about 5% of net sales. This greater leverage shows that these CLEC-surrogates are much weaker financially – and thus would be affected even more adversely by an overstatement of input costs – than the average firm in the S&P 500 Index.

III. AN OVERSTATEMENT OF UNE COSTS WOULD LIKELY CUT-OFF RESIDENTIAL AND RURAL MARKETS FROM COMPETITION.

20. If all customer segments provided equal profit margins to a CLEC, an increase in input prices would be "dichotomous," that is, would have one of two effects: either the input price increase would be sufficient to prevent CLECs from providing local exchange service to any and all customer segments, or CLEC competitive service would continue to be available to all customer segments.

21. In reality, however, all customer segments do not offer identical profit margins. Typically, some classes of customers offer revenue opportunities that vary greatly relative to the cost that must be incurred to serve these segments. For example, it is common for the share of revenues available from business customers to exceed the share of costs attributable to business customers. Conversely, the share of revenues available from residential customers may fall short of their share of costs.[13] Thus, differences in retail tariffs may make the profit margins available from business customers higher than the margins available from residential customers. Similarly, it is common for geographic differences in retail rates to fail to reflect fully the differences in cost associated with serving urban customers versus rural customers.[14] Thus, urban customer profit margins may exceed those available from rural customer segments.

22. If profit margins differ across customer segments, the effect of an increase in a firm's input costs may not be dichotomous. In the face of an input price increase, a CLEC's optimal strategy may well be to curtail sales of its products to its lowest-margin customer

[13] Of course, these mismatches between revenues and costs imply only that profit margins may differ across services and do not necessarily imply that residence service is unprofitable.

[14] Indeed, even though urban customers are less costly to serve than rural customers, it is common for rates in urban retail tariffs to *exceed* those in tariffs for rural service.

segments, while continuing to offer service to higher-margin segments.[15] For example, assume that there are two customer groups – business and residential customers – buying telephone services, with business customers purchasing $50 of telephone services per month, and residential customers purchasing $37 of telephone services per month. Assume further that the TELRIC of the purchased inputs required to serve a customer is $25, regardless of whether the customer is business or residential. Thus, the net revenue available to a CLEC from a business customer is $25 ($50 - $25) and from a residential customer is $12 ($37 - $25). Assume, as well, that the CLEC's internal direct cost of serving each type of customer is $10 per month (a CLEC's internal direct costs may, in fact, be higher). In this scenario, the profit margin would be $15 ($25 - $10) from business customers but only $2 ($12 - $10) from residential customers. Because customers in each group provide a positive margin, the CLEC would serve both customer groups, although it is likely that the CLEC would focus its marketing efforts on the business segment, where the profit margin is higher.

23. If, however, the price charged for purchased inputs in this scenario is increased by 20%, the cost of the purchased inputs required to serve business or residential customers rises to $30 (1.20 x $25). The result is a decreased, but still positive, profit margin of $10 from serving business customers, but a *negative* margin of $3 from serving residential customers. As a result, the CLEC will withdraw its service offer to residential customers.[16] This is illustrated in Table 5, below.

[15] Note that because certain of a CLEC's costs (*e.g.*, ordering and billing systems and other corporate overheads) may be shared across customer segments, a CLEC's inability to address a particular market segment causes a greater share of its overhead costs to be borne by its remaining market segments. If these remaining market segments are not sufficiently profitable to cover this increased cost share, the CLEC may withdraw from the complete market.

[16] *See* note 16, *supra*. If a CLEC's inability to serve residential customers leaves an untenable overhead burden on its remaining business customers, the CLEC could withdraw (or not enter) the business market as well.

***Table 5:* Customer Segments Differ in Revenues**

CLEC Income Statement	*Business Customers*	*Residential Customers*
Revenues	$50	$37
Purchased input cost	$25	$25
Net revenue	$25	$12
CLEC internal direct cost	$10	$10
Profit margin available	$15	$2
Would segment be served by CLECs?	**Yes**	**Yes**
Purchased input cost @ 20% increase	$30	$30
Profit margin now available	$10	($3)
Would segment be served by CLECs?	**Yes**	**No**

24. In addition to differing in the revenues that are available from them, customer groups may differ in the costs incurred to serve them even if they pay the same retail rates. In local telephone markets, those cost differences are typically driven by differences in the loop costs of serving customers located in dense, metropolitan-type areas versus serving customers located in sparsely populated rural areas. For example, if a subset of business customers is remotely located, their higher loop costs would increase the cost of the purchased inputs required to serve them. Similarly, there may be a subset of residential customers located in urban areas (who may also live in multi-unit dwellings) whose purchased inputs are less expensive than those required to serve the average residential customer.

25. Assume, for example, that if a CLEC serves rural business customers, it faces purchased input costs of $35, or $10 higher than the business group average of $25. Similarly, assume that the purchased input costs of serving urban residential customers in multi-

unit dwellings is $20, or $5 less than the purchased input cost of $25 for the average residential customer. As Table 6 illustrates, in this scenario rural business customers would provide net revenues of $15 ($50 - $35). Because these revenues exceed the CLEC's internal direct cost of $10 and provides a profit margin of $5, rural business customers may be served along with non-rural business customers. Urban residential customers provide net revenues of $17 ($37 - $20), and will be served because this amount also exceeds the CLEC's direct internal cost of $10. However, service to non-urban residential customers would yield a *negative* profit margin of $3, because the net revenues of $7 ($37 - $30) would be below the CLEC's internal cost of $10. This is illustrated in the third column of Table 6. If the CLEC can direct its residential marketing strictly to customers that live in urban areas, it is optimal for the CLEC to serve only urban residential customers and to decline to serve non-urban residential customers.

Table 6: **Customer Segments Differ in Costs**

CLEC Income Statement	Rural Business Customers	Urban Residential Customers	Non-Urban Residential Customers
Revenues	$50	$37	$37
Purchased input cost	$35	$20	$30
Net revenue	$15	$17	$7
CLEC internal direct cost	$10	$10	$10
Profit margin available	$5	$7	($3)
Would segment be served by CLECs?	**Yes**	**Yes**	**No**
Purchased input cost @ 20% elevation	$42	$24	$36
Profit margin now available	($2)	$3	($9)
Would segment be served by CLECs?	**No**	**Yes**	**No**

26. If purchased input prices are allowed to rise by 20% over TELRIC levels, even fewer customer segments would be served by CLECs, as Table 6 illustrates. Purchased input costs for rural business customers now become $42 (1.20 x $35), and the profit margin on CLEC sales to these customers drops to negative $2. In such circumstances, the CLEC would withdraw its service offering to rural business. The same 20% input price increase would increase total purchased input costs for urban residential customers to $24 (1.20 x $20). Because the profit margin received from these customers would be a positive $3, they might continue to receive service from CLECs. But for non-urban residential customers, a 20% increase in input

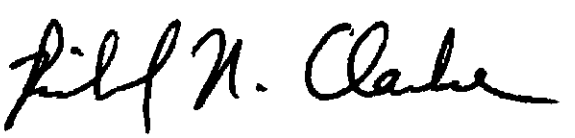
price would produce a further deterioration of gross margins, from negative $3 to negative $9. Thus, non-urban residential customers would continue to receive no service from CLECs.

IV. CONCLUSION

27. The foregoing analysis demonstrates that interconnection and UNE prices must be set at – rather than merely "close" to – TELRIC levels and that ILECs must not inflate CLECs' costs of providing UNE-based services through inefficient provisioning if CLECs are to have real and widespread opportunities to offer complete bundles of telecommunications services to their customers and to compete effectively in local telephone markets. Even small overstatements in these input costs almost certainly will ensure that CLECs will not enter (or will exit) the local exchange markets, and/or that very large segments of customers will be denied the benefits of competition.

28. This concludes my Declaration.

I declare under penalty of perjury that the foregoing Declaration is true and correct.



Richard N. Clarke

Executed on: October 19, 2001